

WHAT IS CLAIMED IS:

1. A chip tester of the type that includes a heat-exchanger which regulates the temperature of an integrated circuit chip that is being tested by pressing against the chip, said heat-exchanger being comprised of
5 an electric heater and a heatsink that are joined together with a layer of an attach material; characterized in that:

said layer of attach material is limited to one that can be melted, at least partially, at a
10 predetermined temperature, and re-solidified, multiple times; and,

a spacer is in said heat-exchanger which stays solid at said predetermined temperature and maintains said layer of attach material at a constant thickness.

2. A chip tester according to claim 1 wherein said spacer is comprised of several metal balls which are embedded in said layer.

3. A chip tester according to claim 1 wherein said spacer is comprised of one or more metal rings which are embedded in said layer.

4. A chip tester according to claim 1 wherein said spacer is comprised of one or more metal wires which are embedded in said layer.

5. A chip tester according to claim 1 wherein said spacer is comprised of one or more projections which extend from said electric heater through said layer to said heatsink.

6. A chip tester according to claim 1 wherein said spacer is comprised of one or more projections which extend from said heatsink through said layer to electric heater.

7. A chip tester according to claim 1 wherein said spacer is comprised of several projections which extend from said electric heater around said layer to said heatsink.

8. A chip tester according to claim 1 wherein said spacer is comprised of several projections which extend from said heatsink around said layer to electric heater.

9. A chip tester according to claim 1 which further includes multiple stops that extend from said heatsink around said electric heater.

10. A chip tester according to claim 1 which further includes multiple stops that extend from said electric heater around said heatsink.

11. A chip tester according to claim 1 which further includes at least one stop that extends from said heatsink through said layer of attach material into a hole in said electric heater.

12. A chip tester according to claim 1 which further includes at least one stop that extends from said electric heater through said layer of attach material into a hole in said heatsink.

13. A chip tester according to claim 1 wherein said electric heater includes a cured layer of ceramic with a first metal layer on said cured ceramic layer and a second metal layer on said first metal layer, and said
5 layer of attach material is a solder which attaches said second metal layer directly to said heatsink.

14. A chip tester according to claim 1 wherein said electric heater includes a cured layer of ceramic, and said layer of attach material is a metal which attaches said cured ceramic layer directly to said heatsink.

15. A chip tester according to claim 1 wherein said electric heater includes a cured layer of ceramic, and said layer of attach material is a thermoplastic which attaches said cured ceramic layer directly to said
5 heatsink.